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CR-131882

Identification and Mapping of Land Use Classes  
in the Kansas City Area by Machine-Processing  
of ERTS-1 Data

Discipline Category: 2A Land Use Classification  
ERTS Frame Number: E 1021-16333, obtained on 13 August 1972  
Run Number: 72062000  
Classification Serial Number: 0423349701  
Subframe Analyzed: Kansas City, Missouri and Kansas; metropolitan-  
suburban, and surrounding agricultural areas.  
ERTS Contract Number: NAS5-21785

Four bands (4,5,6,7) of digitized, multispectral data were analyzed by computer processing to obtain a land use classification of the Kansas City subframe. Initially, the nonsupervised (cluster) method of classification was used. The 12-cluster, spectral map of the area was used as the base map for choosing training samples by hand for land use classes. Training samples were obtained for 1) commercial industrial areas, 2) older housing, 3) single-family residential, 4) wooded residential, 5) agricultural (lighter reflectance), 6) agricultural (darker reflectance), 7) water (from reservoirs), and 8) water (from rivers). Classification results were satisfactory, but the following problems were encountered: 1) numerous, small rural areas were misclassified as single-family residential, and 2) much of the Kansas River near its confluence with the Missouri was misclassified as commercial/industrial.

(E73-10578) IDENTIFICATION AND MAPPING  
OF LAND USE CLASSES IN THE KANSAS CITY  
AREA BY MACHINE PROCESSING OF ERTS-1  
DATA (Purdue Univ.) 1 p HC \$3.00

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